

# Report and Recommendations

of the

## Community-Based Environmental Protection Committee

The National Advisory Council for Environmental  
Policy and Technology  
(NACEPT)

FY97

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## **ABSTRACT**

The Community-Based Environmental Protection (CBEP) Committee of the National Advisory Council for Environmental Policy and Technology (NACEPT) was requested by the EPA Administrator to develop recommendations on how EPA can support and advance community-based environmental protection. The Committee recognized CBEP as a valuable framework for community empowerment and integrated ecosystem management. Community-based environmental protection is one of the most potentially significant initiatives EPA has undertaken in many years. But adopting the CBEP approach requires changes in how EPA conducts its work, by increasing focus on places and the environmental problems encountered in those places. Because EPA cannot be directly involved in every community, the Agency must focus resources on building the capacity of others. EPA's goal with CBEP should be to help communities achieve tangible and sustainable environmental improvement through collaborative, innovative efforts. This process should be based on a framework of: Information, Incentives, Measuring the integrated results of environmental, economic, and social welfare indicators, and Planning for evaluations of CBEP activities. The Committee's recommendations in these areas are:

### ***Information***

- # EPA should continue to develop and disseminate information products designed to increase awareness.
- # EPA should integrate relevant existing data to develop useful information products that will empower communities to understand and address complex environmental issues.
- # As EPA develops or enhances CBEP information products, the Agency should engage representative users in all phases of development.

### ***Incentives***

- # EPA should focus on incentives to encourage community participation in CBEP activities.
- # EPA should develop different incentives for different groups. EPA should tailor incentives according to the opportunities, constraints, and objectives of each target group.
- # EPA should create incentives that will encourage target groups to maintain (not just initiate) desired behaviors.

### ***Measurements***

- # EPA should provide assistance on what to measure, how to measure it, and how to use the measurements.
- # EPA should encourage communities and businesses to report to the public on environmental impacts of their decisions and activities. EPA should also encourage regulated/delegated activities to be reported from several scales.
- # EPA should help communities consider tradeoffs among environmental/human health, economic, and social impacts.

### ***Plan for Evaluation***

- # EPA should evaluate its success in providing useful CBEP support to target audiences, the success of this support in catalyzing initiation of and participation in community environmental activities, and the success of this work in improving environmental quality through CBEP activities.

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## EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) created the National Advisory Council for Environmental Policy and Technology (NACEPT) to provide environmental policy advice on a wide variety of environmental issues. In 1995, at the request of EPA's Administrator, NACEPT offered preliminary recommendations on how EPA can support and advance community-based environmental protection. In 1996, NACEPT created the Community-Based Environmental Protection (CBEP) Committee to develop more detailed recommendations. The Committee met several times in 1996 and 1997 to discuss its charge and to develop recommendations. The Committee's recommendations are as follows:

### ***Information***

- # EPA should continue to develop and disseminate information products designed to increase awareness.

*Outreach products should focus on:*

- *The relationship between environmental quality and a community's physical, social, and economic health.*
- *The ability of community-based environmental protection initiatives to improve the community's overall well-being.*
- *What information is needed to carry out these initiatives.*
- *How this information can be used in efforts to improve environmental quality.*

- # EPA should integrate relevant existing data to develop useful information products that will empower communities to understand and address complex environmental issues.

*This information may include written examples of CBEP activities in various geographic areas, relevant data and indicators presented clearly and with appropriate context, and templates for measuring progress.*

- # As EPA develops or enhances CBEP information products, the Agency should engage representative users in all phases of development.

*Communities and EPA have different, often complementary, perspectives and expertise. EPA should engage in dialogues with communities to understand their needs, learn from their experiences, and obtain their input and feedback. EPA should test information products in representative communities to ensure that information products are thoughtfully targeted to the needs of the various audiences.*

### ***Incentives***

- # EPA should focus on incentives to encourage community participation in CBEP activities.
- # EPA should develop different incentives for different groups. EPA should tailor incentives according to the opportunities, constraints, and objectives of each target group.
- # EPA should create incentives that will encourage target groups to maintain (not just initiate) desired behaviors.

### ***Measurement***

- # EPA should provide assistance on what to measure, how to measure it, and how to use the measurements.

*For example, leading indicators are early warning tools that can help users prevent problems, while current/lagging indicators help users determine whether environmental protection activities are working. EPA should inform communities of where to get existing environmental measurement data and how they can be used. Whether assisting in new measurements or utilization of existing data, EPA should focus on helping decision-makers obtain the information they need for sound decision-making.*

- # EPA should encourage communities and businesses to report to the public on environmental impacts of their decisions and activities. EPA should also encourage regulated/delegated activities to be reported from several scales.

*By demonstrating the value of such reporting to communities and businesses alike, and by providing examples of various formats, EPA can help create conditions that foster routine public reporting.*

- # EPA should help communities consider tradeoffs among environmental/human health, economic, and social impacts.

*This type of guidance is an invaluable tool for decision-making and for forging cooperative (rather than adversarial) relationships with the regulated community.*

### ***Plan for Evaluation***

- # EPA should evaluate its success in providing useful CBEP support to target audiences, the success of this support in catalyzing initiation of and participation in community environmental activities, and the success of this work in improving environmental quality through CBEP activities.

The Committee recognizes that EPA already performs many of these activities—and that it coordinates with other organizations (e.g., other federal agencies, environmental organizations such as the Nature Conservancy, and others). The Committee encourages the Agency to (1) identify where existing activities coincide with the recommendations outlined in this report and (2) continue or, where appropriate, expand its efforts in these areas.

# CHAPTER ONE

## OVERVIEW

### 1. BACKGROUND

The U.S. Environmental Protection Agency (EPA) created the National Advisory Council for Environmental Policy and Technology (NACEPT) to provide environmental policy advice on a wide variety of environmental issues. First chartered by EPA under the Federal Advisory Committee Act (FACA) on July 17, 1988, NACEPT currently consists of about 50 members representing government (state, local, tribal) agencies, organized labor, business, industry, academia, public interest groups, and several other classes of organizations to provide the balanced viewpoints that FACA requires of federal advisory committees.

In 1995 and 1996, at the request of EPA's Administrator, NACEPT focused on how the Agency can support community-based environmental protection (CBEP) activities.<sup>1</sup> In CBEP, communities partner with local governments and industries, states, federal agencies, and other stakeholders to identify environmental problems and priorities in specific places. The communities then identify and implement management strategies to achieve community objectives in these areas. Adopting the CBEP approach requires changes in how EPA conducts its work, with an increased focus on places and the environmental problems encountered in those places. Because EPA cannot be directly involved in every community, the Agency must focus resources on building the capacity of others. EPA's goal with CBEP is to help communities achieve tangible and sustainable environmental results through collaborative, innovative efforts. In 1995, NACEPT formed three committees to consider ecosystem management and ecological, economic, and social needs required for CBEP. As set forth in

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*Community-based environmental protection is a tool for improved environmental quality and health through citizen activity. It is about building constituencies and fostering control.*

*--Comment made during CBEP Committee discussions.*

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<sup>1</sup>Throughout this report, NACEPT uses the term "community-based environmental protection (CBEP)" to refer to the wide range of community-driven environmental protection efforts that take place in this country and around the world. NACEPT recognizes that different individuals and groups may have different names for these activities, such as place-based or geographic-based initiatives. These activities, whatever their name, are not new and might or might not involve EPA. NACEPT simply uses the term CBEP for convenience in discussing how EPA can promote and support such community-driven initiatives.



NACEPT's June 1996 report,<sup>2</sup> Council recommendations addressed:

- # Changes needed in institutional roles and responsibilities.

*EPA should take on new roles (as leader, convener, mediator, and educator) and develop collaborative partnerships with other federal agencies, states, local governments, private parties, and communities.*

- # Tools and resources needed, including scientific models, data and information, and training.

*EPA can contribute to the development and improvement of these tools in several specific ways (outlined in the June 1996 report).*

- # Steps needed to integrate economic and ecosystem management goals.

*EPA can play important roles in promoting consensus, designing accounting tools, developing incentives, and measuring, evaluating, and modeling impacts.*

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*The balance of nature is built of a series of interrelationships between living things, and between living things and their environment. You can't just step in with some brute force and change one thing without changing a good many others. Now this doesn't mean, of course, that we must never interfere, that we must not attempt to tilt that balance of nature in our favor. But when we do make this attempt, we must know what we're doing, we must know the consequences.*

*-- Rachel Carson, The Sense of Wonder*

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NACEPT endorsed CBEP as a valuable framework for community empowerment and integrated ecosystem management. NACEPT considers focused and organized support of CBEP one of the most potentially significant initiatives EPA has undertaken in many years.

## **2. NACEPT'S COMMUNITY-BASED ENVIRONMENTAL PROTECTION COMMITTEE**

In fiscal year 1996, the EPA Administrator asked NACEPT to follow up with more detailed recommendations. NACEPT created the Community-Based Environmental Protection (CBEP) Committee to develop recommendations. The Committee includes representatives from state and local agencies, academia (business/economic and environmental fields), community environmental organizations, industry, and consulting companies (Appendix A, Members of NACEPT's CBEP Committee). It is charged with:

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<sup>2</sup>U.S. EPA. 1996. Promoting innovative approaches to environmental protection: A summary of recommendations from the National Advisory Council for Environmental Policy and Technology. EPA 100-R-96-003. Office of Cooperative Environmental Management, Washington, DC. June.

- # Examining the elements of sustainable economies and opportunities for harmonizing environmental policy, economic activity, and ecosystem management (an *information* activity).
- # Identifying regulatory and nonregulatory public and private *incentives* that can be used to promote community-based environmental protection work.
- # Identifying *measures* of success in implementing and evaluating CBEP programs.

### 3. FRAMEWORK FOR DELIBERATIONS

The CBEP Committee met in April, July, September, and December of 1996 and March of 1997 to address this charge. During the first meeting, the Committee developed a framework for structuring its discussions and recommendations (Figure 1, Framework for CBEP Recommendations, page 1-4). This framework identifies three broad components of CBEP work that EPA can promote and support:

- # Information.
- # Incentives.
- # Integrated measurement of environmental, economic, and social welfare indicators ("measurement", for short).

These components are defined in Figure 1 and discussed further in Chapters 2 through 4 of this report. The CBEP Committee chose these components because they are ones that EPA should be able to pursue effectively and efficiently. For each, the CBEP Committee considered what EPA can and should do to promote and support CBEP work. During its deliberations, the Committee stressed the importance of ensuring the efficacy and practicality of EPA activities to promote community-based environmental protection. To underscore this point, the Committee placed the three components in the Framework for CBEP Recommendations on a foundation consisting of:

- # Plan for evaluation
- # Execution

As in any substantial project, the Committee acknowledged CBEP's need for a strong foundation. EPA must develop benchmarks to evaluate the success of its activities (plan for evaluation) and specific steps it can take to implement Committee recommendations and the CBEP program (execution).

The Committee recognizes that environmental problems and CBEP activities exist across the entire range of geographic scales. EPA-sponsored information, incentives, and measurement resources designed to promote environmental activities at one scale may be inappropriate for other scales (“one size does not fit all”). Therefore, the Committee developed recommendations for four representative scales:

- # Microcommunity (e.g., a neighborhood or hydrological unit such as a small watershed)
- # Local community (e.g., a town, city, or county)
- # Regional community (e.g., a large watershed, county, or group of counties)
- # Global community (e.g., across national boundaries, continent, or planet)

The Committee emphasized that communities must identify the scale of both the problem and its cause. This will help to determine when the community can solve its environmental problems and when/if it must collaborate to address cross-scale problems.

## **4. ASSUMPTIONS**

The CBEP Committee recognizes that the recommendations described in this report are predicated on several assumptions:

- # To achieve further improvements in environmental quality, additional initiatives are needed.
- # Community-based action can produce improvements in environmental quality as well as other benefits (e.g., community empowerment, holistic examination of issues to generate integrated solutions). As a result, CBEP activities are important initiatives, and EPA support for these initiatives should help empower communities.
- # EPA should first foster (when awareness of an issue is low) or reinforce community awareness of the need to examine environmental issues, then proactively make information on the sources, type, and extent of environmental problems available to communities.

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|---|---|---|
| # | CBEP initiatives should involve many different interests, and EPA support of CBEP work should promote diverse stakeholder involvement. Diverse interests can come to agreements that all can accept, even if the agreements do not fulfill the sometimes competing wishes of individual participants. | <hr style="border: 2px solid black;"/> <p><i>...Key stakeholders in the system must come together and engage in a process with a common objective. These stakeholders must find common ground, knowing that they will not come away with all of their positions endorsed.</i></p> |
| # | EPA may suggest programs, document best practices, and otherwise provide information, but communities will make their own choices about what will work for them.  | <p><i>--Karl Hausker. 1997. Enterprise for the Environment: Building a New Consensus. Environmental Business Journal: January 1997.</i></p> <hr style="border: 2px solid black;"/>  |
| # | EPA should participate in and support local initiatives. Where appropriate, the Agency should build on information developed at the local level to help advance other local or federal goals.   |   |
| # | EPA should support and leverage the many existing non-EPA programs, private or governmental, as a preferred option to duplicating them or creating new solutions.   |   |

The CBEP Committee attempted to assimilate many perspectives to develop workable recommendations. As is typical in a consensus process, no single set of solutions will work for all audiences or address all needs. Throughout this report, the Committee offers examples to illustrate how its recommendations can be applied in varied ways to respond to the different circumstances of individual communities.

## CHAPTER TWO

### RECOMMENDATIONS FOR CBEP INFORMATION NEEDS

#### 1. INTRODUCTION

This chapter addresses the first component in the CBEP framework for advancing community-based environmental protection, namely information (Figure 1, Framework for CBEP Recommendations, page 1-4). **For CBEP purposes, information consists of data and materials to support community-based environmental protection activities and decision-making.** For example, communities need information to understand existing environmental conditions, assess the scope and causes of problems, identify possible solutions, and analyze and evaluate results of environmental protection activities. In particular, information on indicators and benchmarks (see Chapter Four for further discussion) serves as a foundation for analysis, evaluation, and reporting—and for anticipating emerging environmental issues.

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*People cannot respond to information they do not have, nor can they achieve goals or targets of which they are not aware.*

*--Sustainable Seattle. 1996. A Primer for Creating New Measurements of Progress.*

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To be effective, the content and presentation of information must be thoughtfully targeted to the needs of the various participants in CBEP work (e.g., community organizers, ad hoc community groups, local governments, stakeholder groups). Their needs exist across four scales: microcommunity, local, regional, and global (Figure 2, Framework for CBEP Recommendations: Information Needs, page 2-2). The CBEP Committee supports the interim recommendations of the NACEPT's Information Impacts Committee<sup>3</sup> for addressing these needs. The recommendations below provide additional suggestions for how EPA can use information to facilitate community-based environmental protection efforts:

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<sup>3</sup>Information Impacts Committee (IIC) of the National Advisory Council on Environmental Policy and Technology (NACEPT). January 24, 1997. Interim Report of Recommendations.

- # **Recommendation A:** EPA should continue to develop and disseminate information products designed to increase awareness.

*Outreach products should focus on:*

- *The relationship between environmental quality and a community's physical, social, and economic health.*
- *The ability of community-based environmental protection initiatives to improve the community's overall well-being.*
- *What information is needed to carry out these initiatives.*
- *How this information can be used in efforts to improve environmental quality.*

- # **Recommendation B:** EPA should integrate relevant existing data to develop useful information products that will empower communities to understand and address complex environmental issues.

*This information may include written examples of CBEP activities in various geographic areas, relevant data and indicators presented clearly and with appropriate context, and templates for measuring progress.*

- # **Recommendation C:** As EPA develops or enhances CBEP information products, the Agency should engage representative users in all phases of development.

*Communities and EPA have different, often complementary, perspectives and expertise. EPA should engage in dialogues with communities to understand their needs, learn from their experiences, and obtain their input and feedback. EPA should test information products in representative communities to ensure that information products are thoughtfully targeted to the needs of the various audiences.*

These recommendations are described in Section 2 below. Section 3 (Execution) of this chapter suggests actions to carry out a successful CBEP information program.

## 2. RECOMMENDATIONS

### **RECOMMENDATION A: EPA should continue to develop and disseminate information products designed to increase awareness.**

*Outreach products should focus on:*

- *The relationship between environmental quality and a community's physical, social, and economic health.*
- *The ability of community-based environmental protection initiatives to improve the community's overall well-being.*
- *What information is needed to carry out these initiatives.*
- *How this information can be used in efforts to improve environmental quality.*

Scale of Application: Micro, local, regional, and global.

Information is a powerful tool the Agency can use to motivate and empower communities and stakeholders at all geographic levels to identify, prevent, and correct environmental problems. Information from EPA can help communities make decisions to implement their own environmental solutions based on economic viability, environmental integrity, social equity, and cultural uniqueness. Communities vary tremendously, however, in their awareness of and participation in CBEP as a means of solving problems. As part of its larger effort to organize and present CBEP information for communities, therefore, EPA must convey why CBEP is important. EPA should stress that CBEP is a positive, effective way for citizens to ensure the overall health of their community, given that government cannot (and should not) do everything. CBEP is an opportunity to identify relationships between environmental quality and the community's social, physical, and economic health.

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*The Agency must answer "so what" questions that communities might have: What is the purpose of CBEP? Why should we bother? What is the point of collecting CBEP information, how does it relate to us, and how can we use it in our unique situation?*

*--Comment made during CBEP Committee discussions.*

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EPA must establish a connection between *having* information and *using* it. The Agency must explain what information is needed, how to use it, and when. Only with a two-pronged information campaign—to increase

awareness of the effectiveness of community-based environmental protection and the uses of CBEP information (Recommendation A) and to disseminate scientific and other information that communities will need to conduct CBEP projects (Recommendation B)—will EPA maximize its role as a CBEP information provider. Where possible, EPA should help communities connect with each other (e.g., by identifying networking or mentoring opportunities) to leverage community experience and promote information sharing.

**RECOMMENDATION B: EPA should integrate relevant existing data to develop useful information products that will empower communities to understand and address complex environmental issues.**

*This information may include written examples of CBEP activities in various geographic areas, relevant data and indicators presented clearly and with appropriate context, and templates for measuring progress.*

Scale of Application: Micro, local, and regional.

Communities embarking on CBEP efforts need strategies for improving environmental quality, information on organizing people and building community support, and scientific information and analytical tools. Although CBEP is most powerful when communities use an integrated approach to examine their situations holistically, for illustrative purposes, the following uses a specific issue (wetlands preservation) to illustrate topics that EPA could address to help meet community information needs:

- # Visioning, the process of community goal-setting for the future in which communities decide what they would like their future to look like (including, for example, how to balance wetlands preservation with future development needs).
- # Strategies for scoping out existing community problems and their causes (e.g., how to obtain information from EPA's Surf Your Watershed Web site to assess the relative extent of a point source or chemical release problem in local waters).
- # Methods of organizing people and building community support for an environmental protection effort (e.g., how to generate awareness of the short- and long-term economic as well as environmental ramifications of wetlands disappearance, how to publicize the issue, and how to create forums for input and participation).
- # Approaches to working cooperatively with others when problems transcend geographic boundaries (e.g., how to organize charrettes, which bring people together to analyze a problem and decide on a unified approach).



- # Methods of evaluating the success of a community's environmental protection efforts (e.g., how to measure the size and health of wetlands in the community before, during, and after a CBEP project).
- # Examples of innovative solutions to technical problems, and other case studies and success stories (e.g., how a community designed an ordinance to promote wetlands preservation, case studies of successful local land trusts).

EPA should promote the development of integrated information for communities to provide a meaningful context for scientific data. NACEPT's Information Impacts Committee addressed this issue in its report to Deputy Administrator Hansen; see Recommendation 3 of that report for more details.

EPA should focus its CBEP information efforts on those tasks that are unlikely to be undertaken by other agencies or organizations and that the Agency can accomplish more efficiently than state or local agencies or organizations working individually. Appropriate Agency tasks include, for example:

- # Thoughtfully eliciting symptoms ("where does it hurt" information) to assist communities in identifying environmental problems—and interactions between indicators as they play out in the community.
- # Determining what types of information are most needed by CBEP stakeholders, such as merchants, city planners, local government officials, clergy, sport enthusiasts (e.g., anglers), and community conservation organizations.

*In this area as in others, EPA should coordinate with existing efforts (e.g., demonstration projects undertaken by the President's Council on Sustainable Development) to leverage those resources.*

- # Developing and implementing strategies to disseminate information to CBEP stakeholders on a nationwide basis, recognizing the access and equity issues inherent in the use of today's technology.
- # Taking steps (e.g., via research, incentives, training, or reengineering of database systems) to make available to communities information that is needed but currently unavailable or inaccessible.

Examples of useful projects EPA could undertake to provide CBEP information can be found in Table 1, Examples of Potential EPA CBEP Information Projects, on page 2-7.

**TABLE 1**

**EXAMPLES OF POTENTIAL EPA CBEP INFORMATION PROJECTS**

*These examples of potential EPA CBEP information projects are presented for illustrative purposes. Where available, the Agency should leverage resources from other sources.*

**Provide Information About Sources of Environmental Problems**

Data on the sources, type, and extent of environmental problems are important to identify and diagnose environmental problems at the community level. EPA already has substantial information of this nature in its regulatory databases. EPA should proactively make this information available to communities (e.g., via Geographic Information Systems [GIS] or Internet tools). Also, EPA can ensure that the importance of collecting CBEP-related information from the regulated community is not diminished as the Agency strives to reduce the regulatory reporting and recordkeeping burden. EPA is currently developing policy for a one-stop reporting program.

**Provide Guidance and Information About Leading Indicators of Potential Environmental Problems**

EPA can advise communities on what information types serve as leading indicators of environmental problems that may occur in the future. For example, erosion in runoff from construction sites can be an indicator of potential water problems that may have broader ecological ramifications. Within EPA, indicators are constantly being identified and promoted as part of an ongoing process. The Agency can make available data it has on leading indicators. Both guidance and data would help communities prevent environmental problems.

**Identify or Flag Place-Based Information**

Easily accessed environmental data are critical to communities seeking to identify, diagnose, prevent, and/or resolve environmental problems. EPA can tag data pertinent to a particular geographic area so that the data may be readily retrieved and utilized for CBEP purposes. One approach, for example, is to increase Agency efforts to tag data by hydrologic units. Also, when developing new environmental databases, EPA should ensure easy access to geographic and other data.

**Develop a Resource Guide for Small and Medium-Sized Companies**

Because of limited resources, small and medium-sized companies often have much greater difficulty than larger companies in identifying and implementing opportunities for environmental improvement. EPA can produce sector-specific resource guides and other materials for small and medium-sized companies describing affordable opportunities for environmental improvement that can benefit both the company and the local community.

**Support Corporate Initiatives To Report Environmental Results on a Facility Basis**

At the local level, communities need information about corporate environmental performance on a facility basis. EPA can encourage corporate reporting on a facility basis (e.g., by providing models, guidance, and incentives) to help make this type of information available to communities.

**RECOMMENDATION C: As EPA develops or enhances CBEP information products, the Agency should engage representative users in all phases of development.**

*Communities and EPA have different, often complementary, perspectives and expertise. EPA should engage in dialogues with communities to understand their needs, learn from their experiences, and obtain their input and feedback. EPA should test information products in representative communities to ensure that information products are thoughtfully targeted to the needs of the various audiences.*

Scale of Application: Micro and local.

Audiences for CBEP information include community organizers, ad hoc community groups that organize for particular environmental purposes, local governments, and stakeholder groups (e.g., neighborhood, resident, and homeowners associations; students and teachers; nonprofit organizations such as land trusts). CBEP information will be effective only if both the content and presentation are thoughtfully targeted to the needs of these various audiences. Careful targeting will help ensure that the information is interpreted and used in ways that promote environmental improvement. Involving representative users in all phases of development is the best way to ensure the effectiveness of CBEP information products.

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*Talk to us in our terms, in language we can understand.*

*--Yolanda Allen, Community Coalition for Environmental Justice, speaking at a CBEP Committee meeting.*

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NACEPT's Information Impacts Committee discussed the importance of stakeholder involvement in the development, implementation, and evaluation of information policies and mechanisms. See Recommendation 5 of that committee's report to Deputy Administrator Hansen for details. Also see Recommendation 4 for suggestions for broadening public access to EPA information.

### 3. EXECUTION

The formation of a Center for Environmental Information and Statistics (CEIS) within EPA is a positive step toward providing the organization and leadership needed to execute the Agency's role as a CBEP information provider. The following are specific suggestions for how CEIS and others in EPA can implement the recommendations in this report:

- # Engage and support communities
- # Publicize the availability of CBEP information
- # Target the information to the audience's needs
- # Survey and integrate existing CBEP information
- # Organize and display the information
- # Partner with other organizations
- # Use innovative approaches

Some of these suggestions coincide with approaches that CEIS already plans to use. In those cases, the suggestions are intended to support those plans. The CBEP Committee also supports the ideas presented in the interim recommendations report of NACEPT's Information Impacts Committee (see especially Recommendations 3, 4, and 5).

#### **Engage and Support Communities**

Communities can resolve significant problems at their community level. Many communities have worked to do so, and can serve as information resources and mentors to other communities and EPA. Some communities have less experience with community-based environmental protection. EPA can engage and support such communities by, for example, identifying what problems can be addressed at the local level and by facilitating communication between communities affected by the same problem. To ensure success, EPA must place a high priority on motivating and/or supporting communities to help them access and use CBEP information that the Agency and others make available. For example:

- # EPA regional staff have met and should continue to meet with community leaders and stakeholders to help identify their environmental problems.

*Support and guidance by EPA regional staff can be particularly important when community activities have unintended environmental impacts (e.g., when rapid development exacerbates local environmental problems).*

- # An EPA CBEP outreach campaign could include information products on the ability of community-based environmental protection to holistically address environmental, social, and economic concerns.

*The campaign could also include mechanisms (such as awards and media recognition) to publicize and acknowledge successful community efforts.*

- # Regional workshops and leadership training opportunities would motivate communities, increase awareness of community-based environmental protection issues, and connect individuals representing communities of different geographic scales and levels of awareness.

### **Publicize the Availability of CBEP Information**

In addition to motivating communities, the Agency should publicize the availability of CBEP information (e.g., via articles/ads in nationally known magazines and local newspapers) to promote maximum use of these resources. To ensure effective publicity, EPA should partner with other organizations doing related outreach work. Also, if appropriate, EPA could hire a professional outreach, public relations, or marketing firm to design a campaign—targeted to local communities and other potential users—to publicize community-based environmental activities and how to get information about them. Mechanisms for publicity may include, for example, a magazine ad campaign, radio and television public service announcements, announcements on the Internet, announcements in association newsletters, and publicity at the local level via schools, religious institutions, community or regional leaders, companies, grocery stores, and environmental organizations.

### **Target the Information to the Audience's Needs**

*Types of Audiences.* Audiences for CBEP information include community organizers, ad hoc community groups that organize for CBEP purposes, local governments, and other stakeholder groups. When awareness of a particular issue is low or nonexistent, these audiences first need to become aware of how they can utilize a CBEP approach to meet their needs. Then they need information explaining how to detect and investigate environmental problems, how to organize and sustain CBEP groups, and how to get results.

Other audiences for CBEP information include sectors, such as businesses and industry, that may be willing to initiate efforts for environmental improvement. For example, businesses need information about why environmental improvement is important, what the benefits are, and how improvement can be accomplished (e.g., via environmental management systems, environmental cost accounting).

*Information Needs.* Different audiences will have different information needs. Novices to CBEP activities will need easy access to information that is brief, presented in lay terms, and broad in scope. With more experience, practitioners will need detailed guidance or data on specific topics. Whatever their level of CBEP experience, most users will access EPA-provided information without Agency assistance. Therefore, any CBEP information, guidance, or systems developed by EPA must be as user-friendly and comprehensible as possible.

As mentioned in Recommendation C, a cross section of communities should be engaged at each level of product development to ascertain what information they need, in what form, and in what level of detail. The results of this interaction should provide the basis for EPA's CBEP information products.

*Distribution Mechanisms.* EPA already uses some, if not all, of these mechanisms. However, to provide for the various audiences of EPA's CBEP information efforts, the Agency should continue to use a variety of mechanisms to package and distribute information:

- # The Internet is an increasingly valuable and versatile medium that enables widespread distribution of both summary and detailed information. Many local libraries now offer access to the Internet.
- # Publications (e.g., national newsletters and magazines for state and county governments) remain an important mechanism for advertising and distributing information.
- # Meetings (e.g., training seminars) provide face-to-face interaction.
- # Other formats should be considered, such as demonstration projects, train-the-trainer workshops, and a hotline number for CBEP information queries.

## Survey and Integrate Existing CBEP Information

The needs of the audiences of CBEP information must drive EPA efforts to provide information. EPA should organize information currently available within the Agency in a way that makes relevant information more accessible to these audiences. EPA need not produce a paper catalog of available data, but should cross-reference and make available related data with appropriate contextual information (see Recommendation 3 in the Information Impacts Committee's interim report). Where feasible, EPA should also identify and integrate applicable information from outside the Agency.

Organizing existing information will be difficult, but it will be valuable because:

- # As a federal-level agency, EPA can play an important role in synthesizing and disseminating its existing information.  
*For example, the Agency should examine its existing CBEP information materials (publications, videos, etc.) to determine what will be most useful to communities.*
- # A study of currently available information will help identify CBEP information areas that are *not* being addressed.  
*For example, EPA might identify gaps in information on indicators of environmental quality at different scales or economic benefits of environmental health. EPA then can determine whether it should conduct research or initiate specific projects to provide this information.*
- # A study of currently available information will help EPA avoid wasting resources by duplicating efforts and information.

EPA should play a shared coordinating role in making available information from outside the Agency. While making its own information more accessible, EPA should serve as a "pointer" to information and success stories from other organizations. Similarly, the Agency should facilitate networking by connecting individuals/organizations doing similar types of work. For example, EPA could contribute to a major federal effort already underway to connect people working on sustainability to develop a "catalog" of indicators and measures of sustainability.

## **Organize and Display the Information**

Whatever the form of the information (e.g., a citizen's handbook or Internet tool), EPA should develop a method for clearly organizing and displaying available information. This will enable users to readily identify which information will be most useful to them and obtain more detailed information as they need it. For electronic searches, a transparent and user-friendly information access mechanism will ensure that users have maximum autonomy in locating and accessing the information they need.

## **Partner With Other Organizations**

Many organizations and institutions at all geographic levels are conducting or initiating CBEP-related efforts. Activities include specific place-based projects (e.g., cleaning up the Elizabeth River in Virginia), as well as the development of guidance and other informational tools (e.g., databases, software programs, mailing lists) for community environmental projects. These efforts provide EPA with important opportunities to leverage funds and personnel resources in meeting CBEP information needs. Therefore, EPA should coordinate, collaborate, and partner with organizations across sectors and geographic levels to take maximum advantage of these opportunities.

## **Use Innovative Approaches**

Historically, many of EPA's environmental protection activities have taken the form of national- or regional-level programs driven by regulatory authorities and mandates. In contrast, the success of CBEP efforts—particularly those at local or microcommunity levels—relies on site- and situation-specific solutions crafted and executed by the community's stakeholders.

EPA is currently trying to engage appropriate stakeholders. To successfully meet CBEP information needs, the Agency must renew and strengthen its commitment to involve the appropriate regions and agencies across multiple geographic scales. Also, EPA should not be constrained by single-media or regulatory-based approaches. Instead, EPA should be creative and flexible in developing and implementing effective informational strategies and products to meet the various levels of CBEP information needs.



## CHAPTER THREE

### RECOMMENDATIONS FOR CBEP INCENTIVES

#### 1. INTRODUCTION

This chapter addresses the second component in the CBEP framework for advancing community-based environmental protection, namely incentives (Figure 1, Framework for CBEP Recommendations, page 1-4).

**Incentives are actions, strategies, policies, and/or regulations that induce or empower individuals and organizations to change their behavior.** For CBEP purposes, incentives exist across four scales: microcommunity, local, regional, and global (Figure 3, Framework for CBEP Recommendations: Incentives, page 3-2). The recommendations below indicate how EPA can use incentives to promote participation in CBEP efforts:

- # **Recommendation A:** EPA should focus on incentives to encourage community participation in CBEP activities.
- # **Recommendation B:** EPA should develop different incentives for different groups. EPA should tailor incentives according to the opportunities, constraints, and objectives of each target group.
- # **Recommendation C:** EPA should create incentives that will encourage target groups to maintain (not just initiate) desired behaviors.

These recommendations are described in Section 2 below. Section 3 (Execution) of this chapter suggests actions to carry out a successful CBEP incentives program.

## 2. RECOMMENDATIONS

### **RECOMMENDATION A: EPA should focus on incentives to encourage community participation in CBEP activities.**

Scale of Application: Micro, local, regional, and global.

EPA-fashioned incentives are aimed at inducing or empowering affected parties to engage in effective community environmental protection or improvement activities. Such incentives work by affecting the opportunities, constraints, and objectives of the affected parties. They may, for example, increase job or sales opportunities, reduce the cost or difficulty of complying with regulations, produce financial rewards, save time, generate favorable PR or good will, or provide a sense of control or empowerment.

Incentives can be positive (i.e., providing rewards to encourage or reinforce desired behavior) or negative (i.e., regulating or penalizing undesired behavior). Consistent with the general trend toward cooperative rather than command-and-control strategies, **EPA should focus primarily on voluntary, positive incentives. Where possible, the Agency should replace barriers (disincentives) in its strategies, policies, and regulations with positive incentives.** Doing so will encourage individuals and organizations to participate more in CBEP activities. Examples include:

- # Promote long-term, continued interaction between EPA personnel and communities.

*Often, EPA promotions depend on a willingness to move or assume other responsibilities. This disrupts the Agency's personal, long-term relationships with community environmental groups.*

- # Encourage other federal agencies to promote community interaction.

- # Rectify communities' and businesses' uncertainty about procedural issues or evaluation criteria.

*For example, some communities do not apply for grants because they are unclear about how to complete an application. Similarly, some businesses do not adopt environmentally friendlier production practices because they are too uncertain about the new practices meeting regulatory standards.*

Establishing suitable rewards will also create more favorable conditions for engaging in community environmental activities. Incentives could include training and other resources for community groups wishing to spearhead environmental initiatives; positive publicity for businesses that use environmentally friendlier production practices or produce environmentally friendly products; flexibility in meeting regulatory standards to states, businesses, and communities that undertake environmental protection work; and recognition or rewards for government agency staff who engage in CBEP efforts. EPA should continue and improve its performance partnership activities to provide greater flexibility to states, tribes, and other entities tackling environmental problems in new (e.g., cross-media) or innovative ways.

Positive incentives will not be sufficient to change everyone's behavior. The CBEP Committee realizes that regulatory enforcement will still be needed to deter or penalize the minority of individuals and organizations that are less well-intentioned.

**RECOMMENDATION B: EPA should develop different incentives for different groups. EPA should tailor incentives according to the opportunities, constraints, and objectives of each target group.**

Scale of Application: Micro, local, regional, and global.

Incentives work by affecting the opportunities, constraints, and objectives of each target group. Therefore, various incentives are needed for different groups. Targets of EPA incentives may include individuals and organizations within and outside EPA. During its discussions, the CBEP Committee identified numerous possible targets of EPA incentives, and listed examples of incentives that might be suitable for each target group. The Committee found overlaps in the incentives and so grouped these targets to present examples more efficiently. The result is Table 2, beginning on page 3-5. The table is intended to show as many *examples* of incentives as possible. It is not all-inclusive, nor is it possible for EPA to implement all of the examples.

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*Sometimes 'we' are 'they'.*

*--Comment made during CBEP  
Committee discussions on target groups.*

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**TABLE 2**

**EXAMPLES OF INCENTIVES FOR SPECIFIC TARGETS**

*Note: The CBEP Committee considers examples marked with asterisks (\*) high priorities for EPA consideration and implementation.*

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<b>Internal EPA Targets</b>	
<i>EPA Headquarters and Regions</i>	<p><b>*Motivate and engage staff:</b></p> <ul style="list-style-type: none"> <li># Establish performance evaluation criteria that reward staff/programs for participation in CBEP activities and interoffice personnel agreements (IPAs)</li> <li># Provide reward money or time off for staff who conduct integrated assessments, involve a broad range of partners and stakeholders, and perform CBEP work that yields positive results</li> <li># Provide recognition or rewards for taking risks (including terminating one's own project if the project appears less effective than hoped)</li> <li># Stabilize funding and staffing (e.g., so that personnel can plan and implement CBEP work without fear of reduced project support)</li> </ul> <p><b>*Inform staff about EPA's Supplemental Environmental Project (SEP) program, which diverts a proportion of penalty money to the community for local environmental projects</b></p> <p><b>Facilitate improved organizational management:</b></p> <ul style="list-style-type: none"> <li># Establish organizational structures and mechanisms for cross-program communication and cooperation</li> <li># Provide opportunities to participate in CBEP work at regional/local levels</li> </ul> <p><b>Facilitate cross-media work by restructuring regulatory requirements that hinder such work or that create burdens that discourage community involvement</b></p> <p><b>Promote prompt action by establishing procedures that require EPA to refund fees (e.g., permits) if the Agency does not meet review deadlines</b></p> <p><b>Provide guidelines (linked to funding) for diversity in the boards/leadership of CBEP groups</b></p> <p><b>Inform landowners about long-term land use planning, management practices, and incentives under their control (e.g., provide information about conservation easements, provide case studies of success stories)</b></p>

TABLE 2 (continued)

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<b>External EPA Targets</b>	
<i>Other Federal Agencies (e.g., Department of Interior, Department of Transportation, others)</i>	<p>Facilitate improved environmental practices by revising processes under cross-cutting Acts that are at cross purposes (e.g., processes under ISTEA that funnel funds into activities that harm the environment unnecessarily):</p> <ul style="list-style-type: none"> <li>* # Gain support from other agencies for increased upfront EPA involvement and feedback to provide greater certainty that stakeholder efforts will be acceptable and approved</li> <li># Provide greater clarity in criteria, goals, and practices (e.g., to remove uncertainty about whether a permit application will meet EPA's requirements and be accepted)</li> <li># Advocate changes to procedures and regulations that constrain conservation-minded management (e.g., Forest Service practices that conflict with conservation)</li> </ul> <p>*Facilitate improved land use practices based on sound science and community values:</p> <ul style="list-style-type: none"> <li># Provide information about how to examine short- versus long-term costs and benefits of land use options</li> <li># Facilitate assignment of nonmarket/nontangible land values (e.g., value to the community as a park, value of cultural amenities, value of enjoyment of the environment) as well as traditional monetary values</li> <li># Provide information about how to perform nonmarket and market analyses of land values and natural resource conservation—and how to determine fair charges (that reflect all types of costs) of land use</li> <li># Facilitate the development of usable, accessible, locally relevant methodologies and models that can be used for full cost accounting</li> <li># Provide information about specific situations that the agency might encounter (e.g., what happens if an endangered species lives on the land)</li> </ul> <p>*Work to motivate other agencies to provide more funding for cooperative conservation efforts</p> <p>Where possible, encourage the use of full cost accounting in priority-setting and decision-making</p>

TABLE 2 (continued)

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<i>States</i>	<p>Facilitate professional development:</p> <ul style="list-style-type: none"> <li># Provide professional development opportunities (e.g., regional training conferences)</li> <li># Provide implementation assistance (e.g., staff, funds, training)</li> </ul> <p>*Enable states to more easily obtain funding:</p> <ul style="list-style-type: none"> <li># Clarify funding opportunities and processes</li> <li># Provide training on grant writing</li> <li># Restructure funding paths (e.g., along community-based paths) to increase the likelihood of community environmental projects being funded</li> </ul> <p>Facilitate innovation by providing increased regulatory flexibility</p>

TABLE 2 (continued)

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<i>County, Municipal, and Other Local Governments</i>	<p>Incentives provided to states (see above)</p> <p>*Empower communities to maintain local control over their economic, cultural, and environmental future by providing:</p> <ul style="list-style-type: none"> <li># Leadership training for local government officials and community leaders</li> <li># Resources for capacity building, especially resources tailored to the size and sophistication of the community</li> <li># Financial and technical support for the "visioning" process, including identifying links between the local and global community</li> <li># Opportunities for local decision-making</li> <li># Flexibility in how to meet standards</li> <li># Clarification of EPA's decision-making process and criteria, with opportunities for local governments to provide feedback to EPA</li> <li># More grants, and increased emphasis on community involvement in the evaluation of grant applications</li> <li># Information on EPA's Supplemental Environmental Project (SEP) program, which diverts a proportion of penalty money to the community for local environmental projects</li> </ul> <p>Facilitate collaborative participation in local land use discussions, providing successful solutions for communities to use as a resource</p>

TABLE 2 (continued)

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<i>Citizens and Advocates (Special Interest Groups)</i>	<p>*Inform citizens about how environmental issues affect their lives and how they can shape their economic, cultural, and environmental futures</p> <p>*Facilitate participation in meetings by providing conditions conducive to relationship building (e.g., provide a comfortable meeting space with childcare, parking; schedule meetings at times and locations convenient for the community)</p> <p>Facilitate the collection of environmental information on and environmental evaluations of local companies and products</p> <p>Facilitate private efforts to prepare understandable reports on the environmental performance of local companies</p> <p>Facilitate broadbased consensus by providing resources:</p> <ul style="list-style-type: none"> <li># To improve representation (in underrepresented areas) in discussions of social and cultural values</li> <li># For independent assessments of EPA plans</li> </ul> <p>Facilitate cooperation by demonstrating a willingness to listen and by promptly following through on discussions and agreements</p> <p>Provide accurate, consistent, timely information (see Chapter 1)</p> <p>Facilitate access to grants:</p> <ul style="list-style-type: none"> <li># Make grants available to nonprofit organizations</li> <li># Provide training on grant writing</li> <li># Reduce red tape</li> <li># Offer more fixed price awards (that provide money at the start rather than reimbursement for expenditures)</li> </ul> <p>*Inform citizens about EPA's SEP program, which diverts a proportion of penalty money to the community for local environmental projects</p> <p>Showcase individuals' activities by offering award or recognition programs</p> <p>Support other entities (e.g., governments, businesses) trying to develop incentives for citizens; support the design of "trickle down" incentives and strategies</p>



TABLE 2 (continued)

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<i>Industry and Small Business</i>	<p>*Provide regulatory flexibility to improve business practices (e.g., to facilitate development of product lifecycle strategies that will internalize environmental costs or promote recycling)</p> <p>*Facilitate company self-measurement and self-reporting; inform companies about self-audit legislation</p> <p>Empower companies to perform their own analyses of downstream or “outyear” costs and the scale of a problem by providing:</p> <ul style="list-style-type: none"> <li># Analysis software and other resources</li> <li># Case studies on how companies have increased profits by adopting environmentally beneficial practices</li> <li># Information on the costs of not adopting such practices (e.g., bad PR, costs of regulations necessitated by environmental problems, costs to business if city goes into nonattainment due in part to company's emissions)</li> </ul> <p>Facilitate improved small business practices and regulatory compliance:</p> <ul style="list-style-type: none"> <li># Provide free surveys and assessments or tools to identify opportunities for saving money while making environmental improvements</li> <li># Facilitate mentoring by informing big businesses of the benefits of helping small businesses improve their practices and by helping to pair big business managers with small business managers</li> </ul> <p>Facilitate communication and cooperation with the community:</p> <ul style="list-style-type: none"> <li># Provide resources to hire a professional mediator to promote conflict resolution rather than litigation (e.g., when there is a serious conflict between an industry/business and a community)</li> <li># Reward firms for community-based environmental protection efforts (e.g., provide free publicity on environmentally beneficial actions)</li> </ul> <p>*Facilitate development of market incentives that the marketplace would not spontaneously generate on the basis of economic return alone (e.g., ecolabeling)</p> <p>Facilitate development of tax incentives (e.g., lower capital gains taxes for those using environmentally beneficial practices)</p>

TABLE 2 (continued)

Target	Examples of Incentives That EPA May Provide or Encourage When Appropriate
<i>Landowners</i>	<p>*Provide regulatory flexibility to encourage ecological land management (e.g., allowing burns, construction of fences)</p> <p>Promote awareness of tax and financial strategies for protecting land from development or otherwise encouraging maintenance of the highest possible environmental values</p> <p>Help landowners understand how to apply tax and financial strategies for protecting land</p> <p>Inform landowners about the environmental impacts of transfer development rights (TDRs) versus purchase development rights (PDRs); provide support for PDR matching funds</p> <p>*Facilitate Brownfields restoration:</p> <ul style="list-style-type: none"> <li># Provide assurance that land cleaned up to an agreed-upon lower standard for industrial reuse will not be subject to liability issues</li> <li># Facilitate the development of strategies to promote community acceptance of reuse plan</li> <li># Provide resources for mediation of disputes with communities on cleanup standards</li> <li># Segregate Superfund monies for municipalities needing to clean up abandoned properties (e.g., gasoline stations)</li> <li># Allow flexibility in payment schedules</li> </ul>

**RECOMMENDATION C: EPA should create incentives that will encourage target groups to maintain (not just initiate) desired behaviors.**

Scale of Application: Micro, local, regional, and global.

Inducing environmentally responsive (or other desired) behaviors on a short-term or one-time basis is comparatively easy when there is an immediate reward. These behaviors often falter if sustained commitment is required. EPA should ensure that any incentives program includes a range of short-term and long-term incentives that will encourage both initiation and maintenance of community environmental activities.

### **3. EXECUTION**

The following five steps are a suggested framework for EPA to use in crafting and evaluating CBEP incentives. The CBEP Committee recommends that EPA apply this process to items in Table 2 (pages 3-5 to 3-11) to develop specific incentives that are likely to be effective. EPA can also use this framework to determine where existing incentives may be having unintended consequences; based on this examination, the Agency can then make changes (as was done, for example, in creating the Brownfields Economic Redevelopment Initiative). The availability of a “tool kit” of effective incentives for communities will encourage use of a CBEP approach to solve environmental problems that remain unresolved by environmental regulations.

- # Define the problem (e.g., resource depletion, habitat/water quality degradation).
- # Identify the root cause(s) of the problem (e.g., specific business or household decisions).
- # Identify the motivations of those causing the problem (e.g., profit, convenience).
- # Identify incentives that will change these motivations (e.g., outreach, community action, pricing public goods).
- # Consider whether the incentives are sufficient to change behavior and address the problem.

### **Step 1—Define the Problem**

As a first step, a clear, specific definition of the problem will help EPA identify an incentive that will be appropriately targeted to the community.

### **Step 2—Identify the Root Cause(s) of the Problem**

Similarly, an accurate understanding of the root cause(s) of the problem (and its geographic scale) is required to identify incentives that will motivate changes in the problem behavior(s). For example, EPA could conduct independent studies or develop survey instruments. By identifying problem behavior(s), EPA will also identify the individuals and organizations contributing to the problem and at what scale. These groups (or the subset contributing most to the problem) then become the target of the incentives.

### **Step 3—Identify the Opportunities, Constraints, and Objectives Motivating the Behavior(s) Causing the Problem**

To identify incentives that will work, EPA must examine the opportunities, constraints, and objectives of the groups identified in Step 2. Unless the policy response affects one or more of these three factors, no change in behavior can be expected. Therefore, no improvement in the problem will occur.

### **Step 4—Identify Incentives That Will Change the Opportunities, Constraints, and Objectives Identified**

Many of the incentives identified earlier in this chapter (e.g., inviting parties to the table, providing facilitation, providing technical assistance) are good things to do, but they may not result in the changes necessary to address the problem. EPA should select those responsible activities that can reasonably be expected to change the specific opportunities, constraints, and objectives identified in Step 3 above in the desired direction.

By carefully selecting incentives, EPA will help ensure that the incentives will be accepted. In the past, some incentives have failed to produce the desired change because they did not mesh with the target group's opportunities, constraints, and objectives. For example, years of facilitated meetings with stakeholders may have clarified the nature and causes of a problem without providing incentives for change. On the other hand, there are numerous

examples of incentives that have worked. In Chattanooga, Tennessee, for example, citizens made significant changes in commuting patterns, industrial activities, and land usage when motivated to do so by compelling health objectives.

#### **Step 5—Consider Whether the Incentives Are Sufficient To Change the Behavior**

Step 4 may produce several possible incentives, but some may be insufficient (at least individually) to motivate changes in behavior in a community. EPA must determine which incentive or combination of incentives will be of sufficient magnitude to motivate the desired change. In some cases, this may require striking a balance between what is theoretically possible and what is practical and feasible.

By following the above five steps, EPA should produce effective CBEP incentives. The Agency should examine its existing actions, strategies, policies, and regulations to determine whether they produce incentives that promote positive change. EPA can do so by following a similar set of steps to determine whether:

- # The policy (or strategy, regulation, etc.) leads to action
- # The action produces positive incentives
- # The incentives are sufficient to motivate changes in behavior
- # The behavior changes are sufficient to affect the environmental issue
- # The environment has improved

## CHAPTER FOUR

### RECOMMENDATIONS FOR CBEP MEASUREMENT NEEDS

#### 1. INTRODUCTION

This chapter addresses the third component in the CBEP framework for advancing community-based environmental protection, namely measurement (Figure 1, Framework for CBEP Recommendations, page

1-4). **For CBEP purposes, measurement clarifies environmental conditions, causes of environmental problems, and changes in environmental quality resulting from human activities.** CBEP measurement of environmental impacts extends across four scales: microcommunity, local, regional, and global (Figure 4, Framework for CBEP Recommendations: Measurement Needs, page 4-2). The recommendations below indicate how EPA can support and promote activities to measure the results of CBEP efforts:

- # **Recommendation A:** EPA should provide assistance on what to measure, how to measure it, and how to use the measurements.

*For example, leading indicators are early warning tools that can help users prevent problems, while current/lagging indicators help users determine whether environmental protection activities are working. EPA should inform communities of where to get existing environmental measurement data and how they can be used. Whether assisting in new measurements or utilization of existing data, EPA should focus on helping decision-makers obtain the information they need for sound decision-making.*

- # **Recommendation B:** EPA should encourage communities and businesses to report to the public on environmental impacts of their decisions and activities. EPA should also encourage regulated/delegated activities to be reported from several scales.

*By demonstrating the value of such reporting to communities and businesses alike, and by providing examples of various formats, EPA can help create conditions that foster routine public reporting.*

- # **Recommendation C:** EPA should help communities consider tradeoffs among environmental/human health, economic, and social impacts.

*This type of guidance is an invaluable tool for decision-making and for forging cooperative (rather than adversarial) relationships with the regulated community.*

These recommendations are described in Section 2 below. Section 3 (Execution) of this chapter suggests actions to implement these recommendations to establish a successful CBEP program.

## 2. RECOMMENDATIONS

### **RECOMMENDATION A: EPA should provide assistance on what to measure, how to measure it, and how to use the measurements.**

*For example, leading indicators are early warning tools that can help users prevent problems, while current/lagging indicators help users determine whether environmental protection activities are working. EPA should inform communities of where to get existing environmental measurement data and how they can be used. Whether assisting in new measurements or utilization of existing data, EPA should focus on helping decision-makers obtain the information they need for sound decision-making.*

Scale of Application: Micro, local, and regional.

Measurement is crucial to understanding both environmental problems and impacts of human activities. Measurements conducted before, during, and after activities can be used to:

# Characterize environmental conditions as they exist now, based on sound science.

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*If we could first know WHERE we are, and WHITHER we are tending, we could BETTER JUDGE WHAT to do, and HOW to do it...*

# Identify causes of environmental problems, including pressures on individual components of the overall environmental picture.

*--Abraham Lincoln, 1858*

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# Focus attention and motivate action, including market action.

*In addition to motivating individuals and organizations to change their behavior, for example, surveys (whether from EPA or another source) that demonstrate a market for “environmentally-friendly” products can spur interest in developing such products. Data on product success, in turn, can motivate more businesses to enter this market or improve their business practices to retain public approval and market shares.*

# Determine priorities (i.e., weigh tradeoffs, choose among options, make risk-based decisions).

# Encourage use of best practices, particularly when performance measurements demonstrate their value compared to traditional approaches.

# Determine if actions are having their desired effects and, if not, take corrective actions.

EPA-sponsored assistance on what to measure, how to measure it, and how to use the measurements will help communities:

- # Understand the range of available measurements and identify those appropriate for their situations.
- # Take full advantage of measurements as a tool for their own community-based environmental protection programs.
- # Identify relationships among environmental problems, causes of problems, and whether they are in a direct and/or extended relationship. In so doing, communities can coordinate and "nest" CBEP measurement activities across scales and form alliances.

Developing indicators is an ongoing process. Disseminating readily available data that EPA and others have should be a top priority so that communities are immediately empowered to perform measurement activities. To provide measurements efficiently, EPA should:

- # Conduct a review of indicators and abandon those that are not useful.
- # Take advantage of the government-wide effort to develop and implement a National Integrated Environmental Monitoring Plan under the coordination of the Committee on Environment and Natural Resources (CENR).

*This initiative provides a powerful new opportunity to provide measurements of the success of environmental protection. EPA should ensure that this monitoring information and associated assessments are readily accessible and useful for measurement of outcomes of CBEP.*

EPA-sponsored guidance should address measurement at all levels—providing both general approaches as well as very specific measures, indicators, methods, models, risk assessment tools, and metrics that can be used in various situations. This "measurement menu" should include indicators of environmental/human health, economic, and social impacts (Table 3, Examples of Indicators That Could Be Used in CBEP Projects, page 4-5). Other indicators may be specific to business activities, health, and the environment. EPA's guidance should:

- # Identify/define each indicator
- # Describe how to identify the indicator, its application, and expected outcome(s)
- # Identify interrelationships with other indicators



**TABLE 3****EXAMPLES OF INDICATORS THAT COULD BE USED IN CBEP PROJECTS**

	<b>Environmental/ Human Health</b>	<b>Economic</b>	<b>Social</b>
<b>Micro Community</b>	<p>! Number of wild salmon returning to spawn</p> <p>! Biodiversity</p>	<p>! Employment concentration</p> <p>! Number of children living in poverty</p>	<p>! Limited recreational opportunities, such as swimming/fishing advisories</p> <p>! Youth involvement in neighborhood projects</p>
<b>Local Community</b>	<p>! Volume of waste at sites</p> <p>! Cancer rate</p>	<p>! Median income per household</p> <p>! Housing affordability</p> <p>! Households below the poverty level</p>	<p>! Attendance at community action group meetings</p> <p>! Student/teacher ratio</p> <p>! Membership in social and civic groups and clubs</p>
<b>Regional Community</b>	<p>! Air pollutant levels</p> <p>! Number of hospitalizations for acute asthma attacks</p>	<p>! Health care expenditures</p> <p>! Emergency room use for non-emergency purposes</p>	<p>! Voting rate</p> <p>! Crime rate</p>
<b>Global Community</b>	<p>! Water temperature</p> <p>! Coastal flooding/soil erosion</p>	<p>! Distribution of personal income</p> <p>! Work required to meet basic needs</p>	<p>! Population count</p> <p>! Adult literacy</p>

Given such a menu, communities can choose which measurement strategies to use based on their own circumstances and values. EPA may provide guidance on conducting community surveys and other methods of measuring community values.

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*What should we measure? Economic vitality, ecological integrity, social equity, and cultural uniqueness.*

*-- Comment made during CBEP Committee discussions.*

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In developing and refining a measurement menu, EPA should solicit the input and feedback of state and other entities with regulated/delegated responsibilities. These entities should encourage community environmental activities and coordination with EPA for consistency and compatibility of indicators and metrics. The process of reviewing the menu will also facilitate learning. Communities can then learn what to assess and how to utilize information to motivate action. Their experience and feedback will help EPA learn more about what is most useful to communities. The demand for indicators will continually change with education, experience, changing circumstances. EPA and its partners should use the feedback to improve and update the menu.

In addition to a menu of measurement options, EPA should provide locally relevant frameworks for data collection, measurement, and evaluation to help communities design their own, realistic environmental measurement efforts. The frameworks should encourage measurements of impacts that extend beyond the geographic boundaries of the community. The measurement results will help communities recognize the range of consequences of their actions/decisions. For example, measurement results could show that pollutant dumping in an upper river reach affects communities downriver. Examples, illustrations, and demonstrations of how to perform measurements at different levels/complexities should be included in EPA's frameworks.

**RECOMMENDATION B: EPA should encourage communities and businesses to report to the public on environmental impacts of their decisions and activities. EPA should also encourage regulated/delegated activities to be reported from several scales.**

*By demonstrating the value of such reporting to communities and businesses alike, and by providing examples of various formats, EPA can help create conditions that foster routine public reporting.*

Scale of Application: Micro, local, regional, and global.

The business community is becoming aware of the need to measure and report environmental impacts of their activities. While broadening awareness and encouraging routine reporting by municipalities and businesses, EPA should encourage businesses to review their activities' lifecycles. By understanding the full cost of an activity now, businesses and municipalities may be able to avoid or anticipate future problems. Lifecycle planning by businesses and communities will save economic and environmental resources. Several existing initiatives, such as the Global Environmental Management Initiative (GEMI), the Public Environmental Reporting Initiative (PERI), and the Coalition for Environmentally Responsible Economies (CERES), already encourage such planning and reporting. Other actions could facilitate reporting at the municipal level:

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*What gets measured gets managed.*

*--Comment made during CBEP Committee discussions.*

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- # Municipalities could take impacts into account when planning a project and awarding the contract. Project bidders should be encouraged and trained to provide information on environmental impacts.
- # EPA could provide guidance to municipalities on *what* to measure for reporting to the public and *how* to present this information in usable, succinct, yet comprehensive formats.

**RECOMMENDATION C: EPA should help communities consider tradeoffs among environmental/human health, economic, and social impacts.**

*This type of guidance is an invaluable tool for decision-making and for forging cooperative (rather than adversarial) relationships with the regulated community.*

Scale of Application: Micro, local, regional, and global.

EPA should provide guidance and tools to determine tradeoffs that communities may want to consider. Assessment methods, decision trees, examples, and demonstrations will help communities weigh possibilities for decision-making. This guidance should help communities and businesses find solutions that harmonize environmental, economic, and social concerns.

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*Indicators inform priorities, focus attention, and motivate action.*

*--Comment made during CBEP Committee discussions.*

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### **3. EXECUTION**

The following are suggestions for how EPA could execute its role in providing measurement tools and guidance and encouraging their use:

- # Determine community measurement needs
- # Share existing measurement tools that are working
- # Develop additional tools (or tailor existing tools) to meet unmet measurement needs
- # Publicize the availability of and disseminate measurement tools

#### **Determine Community Measurement Needs**

Measurement tools must be *relevant* to communities. As a first step (or concurrently with the effort described below to share existing tools), EPA should solicit input from and collaborate with communities to determine their measurement needs for CBEP projects. EPA can accomplish this in several ways. For example, EPA can solicit community input and participation by creating clearinghouses, conducting surveys, convening task forces, and

holding focus groups and town meetings. Other organizations have successfully used these and other similar strategies:

- # Sustainable Seattle developed its indicators guidebook using a citizen-based process.
- # The Yakima River Watershed Council successfully formed an active, consensus-based organization involving irrigators, food processors, the Yakama Indian Nation, electric utilities, timber companies, local business and financial institutions, environmental organizations, and other citizens with water interests.
- # The Community Coalition for Environmental Justice works within urban neighborhoods to stimulate activism among communities of color and others affected by environmental injustice.

EPA should draw on success stories such as these to use as models for soliciting community involvement in the needs analysis process—and later in the development of relevant measurement tools. Existing environmental information-sharing networks (such as the Positive Futures Network) can be used to publicize and broaden participation in these efforts.

### **Share Existing Measurement Tools That Are Working**

Numerous government and nongovernment organizations have developed measurement tools that could be used in community environmental projects. For example, Sustainable Seattle, a volunteer network and civic forum in the Pacific Northwest, has developed a resource guide called *Indicators of Sustainable Community*. This 1995 publication defines and describes indicators of cultural, economic, environmental, and social health. It also provides information on how to evaluate and interpret these indicators and how each is linked to other indicators and issues. Government organizations, environmental groups, industry, and communities have developed similar documents on indicators and a wide range of data and tools that could be useful at different scales. To avoid duplicating work that has already been done and to quickly make available the widest possible array of environmental measurement tools, EPA should:

- # Research measurement tools currently available inside and outside the Agency
- # Determine which are relevant to communities
- # Make these tools available to communities

## **Develop Additional Tools (or Tailor Existing Tools) To Meet Unmet Measurement Needs**

While performing the two tasks described above, EPA can identify redundancies and gaps in existing measurement tools. EPA can also identify opportunities for collaboration in the development of new tools. EPA should then partner with other government and nongovernment organizations to develop new measurement tools to fill unmet community measurement needs. In some cases, this may be accomplished by tailoring existing tools to better meet community needs rather than designing and developing completely new tools. Flexibility is required to make CBEP work. Different communities (and different problems) require different "yardsticks": what works in one community will not necessarily work in another. Small communities, for example, often need very simple metrics; factories may need complex, expensive measurement tools and strategies. EPA must tailor measurement tools to the needs of different audiences who vary greatly in their knowledge and technical sophistication.

In developing/tailoring measurement tools, building and strengthening partnerships should be an Agency priority. Partnering is already highly valued by many groups, such as Chesapeake Bay Program, Positive Futures Network, Small Towns Environment Programs (STEP), Yakima River Watershed Council, Community Coalition for Environmental Justice, Tennessee Valley Authority's Clean Water Initiative, and many others. Partnering will help ensure the cost-effectiveness and acceptance of EPA's mission. In particular, EPA should continue to work with states and tribes in their metric activities. Local units of government, interested citizens and groups, nonprofit organizations, business/industry, and others will provide a "reality check" for the Agency's CBEP measurement projects. As more communities become involved, awareness, interest, and investment in conducting environmental measurements will increase.

## **Publicize the Availability of and Disseminate Measurement Resources**

Finally, EPA will need to do the actual work of publicizing the availability of and disseminating CBEP measurement tools. Much of this can be accomplished using the methods discussed in Chapter 2: Recommendations for CBEP Information Needs. Additional suggestions include:

- # Sponsoring informational or training workshops to empower communities.  
*At these workshops, participants should be encouraged to share information and experiences and to form ongoing alliances and partnerships.*
- # Giving resources to people and organizations as close to the problem (local levels) as possible.  
*Providing modest resources (guidance, tools, funding) can make the difference in the success or failure of a CBEP project.*

Many communities are already actively seeking new, effective measurement tools and will readily respond to information about the availability of new tools. Where interest is not yet high, the Agency should make every effort to include community representatives or organizations in the needs analysis and tool development process to increase awareness of the value of measurement tools. Where appropriate, EPA should solicit the help of community liaisons who can "talk the talk" of the community to help explain measurement issues in the context of their community. Different levels of information (complex strategies, specific tools, simple metrics) in different formats (print, electronic, verbal, video) should be available to different audiences.

## CHAPTER FIVE

### PLANNING FOR EVALUATION

The Agency should establish a plan for evaluation *before* it executes its CBEP support projects. Evaluation provides the feedback the Agency can use to finetune and, where appropriate, substantially modify or expand its activities to efficiently meet the needs of environmental stakeholders at all levels. Periodic evaluations will allow for continual improvement of EPA's efforts to meet the CBEP needs discussed in this report, whether they relate to CBEP information, incentives, or measurement.

#### **RECOMMENDATION A: EPA should evaluate:**

- # Its success in providing useful CBEP support to target audiences.**
- # The success of this support in catalyzing initiation of and participation in community environmental activities.**
- # The success of this work in improving environmental quality.**

Evaluation can be quantitative or qualitative. EPA should determine the type and extent of evaluation that is appropriate based on the urgency and nature of each CBEP project. EPA can then identify what is needed to accomplish the evaluation. Based on this determination, EPA can plan how and when to collect evaluation data. For example, EPA might decide to conduct before-and-after surveys to measure:

- # Awareness of environmental protection opportunities.
- # The number of new CBEP initiatives started.
- # The level of participation in community environmental initiatives before and after the community received EPA support.

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*When considering the performance of specific programs, measures of success should in some way reflect the interests and values of the public as they relate to that program...the final arbiter of success is the public and their representatives.*

*--Engaging the Public in Indicator Development. 1996. Synergy 1(2):11.*

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This general approach to planning for evaluation applies to any EPA effort to support CBEP. Once EPA has developed a plan for evaluation, the Agency should integrate it into its execution plans. For instance, EPA can incorporate CBEP activities into the core program measures and initiatives of its National Goals Project. As EPA collects and analyzes evaluation data, the feedback will determine whether and how to enhance the CBEP support EPA is providing.

## **APPENDIX A**

### **MEMBERS OF THE NATIONAL ADVISORY COUNCIL FOR ENVIRONMENTAL POLICY AND TECHNOLOGY'S COMMUNITY-BASED ENVIRONMENTAL PROTECTION COMMITTEE**

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J. Robert Banks  
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University of Maryland  
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*Note: Italics indicate that the member's term on the Committee expired on October 1, 1996.*

## APPENDIX B

### GLOSSARY

*Note: Some terms are defined narrowly (to refer specifically to community-based environmental protection) and are thus specific to this report.*

advocate	an individual or group representing or promoting a special interest or perspective
benchmark	a point of reference or a standard against which measurements can be compared
brownfield	a site (or portion of a site) that has actual or perceived contamination and an active potential for redevelopment or reuse
Brownfields Economic Redevelopment Initiative	an EPA initiative designed to empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields; initiative strategies can include funding pilot programs and other research, clarifying liability issues, entering into partnerships, conducting outreach activities, developing job training programs, and addressing environmental justice concerns
CBEP <sup>4</sup>	community-based environmental protection: process in which a community identifies environmental issues and priorities in a specific place (the geographic area defined by the issues, the interested and affected people, and the natural landscape in which the issues developed), then identifies and implements management strategies to achieve community objectives; the process is typically open and inclusive, is driven by the place and the people who care about it, integrates environmental management with human needs, considers long-term ecosystem health, and highlights positive correlations between economic prosperity and environmental well-being
CENR	Committee on Environment and Natural Resources

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<sup>4</sup>NACEPT uses the term "community-based environmental protection (CBEP)" to refer to the wide range of community-driven environmental protection efforts that take place in this country and around the world. NACEPT recognizes that different individuals and groups may have different names for these activities, such as place-based or geographic-based initiatives. These activities, whatever their name, are occurring across the nation, but EPA does not participate in most of them. NACEPT simply uses the term CBEP for convenience in discussing how EPA can promote and support such community-driven initiatives.

charrette	type of meeting that brings people together to analyze a problem and decide on a unified approach
community	a place and the people who live there under a common government or united by a common interest
cross-media	related to more than one medium (air, water, land)
EPA	U.S. Environmental Protection Agency
FACA	Federal Advisory Committee Act
full cost accounting	an approach to financial accounting that factors in the full cost of a process or activity, including direct and indirect costs, upstream and downstream costs, etc.
GIS	geographic information system
incentives	in the context of CBEP, actions, strategies, policies, and regulations that induce or empower individuals and organizations to change their behavior (i.e., to engage in effective CBEP initiatives or to otherwise act to improve environmental quality)
indicator	a measurement that reflects the status of a system; in CBEP, an indicator may relate to the health or vitality of an ecosystem, social structure, economic system, and/or culture
information	in the context of CBEP, data and materials to support CBEP activities and decision-making
measurement	for CBEP purposes, activities that clarify environmental conditions, causes of environmental problems, and changes in environmental quality resulting from human activities (including CBEP activities)
mitigation	the creation, restoration, enhancement, and sometimes preservation of an environmental resource to compensate for anticipated impacts to other similar resources (e.g., protection of one wetland to make up for harming another by building on it)
NACEPT	National Advisory Council for Environmental Policy and Technology
Performance Partnership	an EPA grant program designed to give states greater flexibility in allocating funds to reflect local priorities while still pursuing national

	policy objectives and fulfilling all federal statutory requirements; the program includes performance measures to simplify reporting requirements while ensuring continued environmental protection
scale	the size, degree, or scope of an issue or object; for the purpose of this report, the geographic span of the community, problem, or activity
stakeholder	an individual, group, or organization with an interest (stake) in an issue or the outcome of a process or activity
STEP	Small Towns Environment Programs (Washington State)
sustainability	the ability to remain in existence or maintain a desired level of health and vitality (environmental, cultural, economic, and social)
sustainable development	physical, economic, or social change (often building or growth) that maintains or increases quality of life without damaging the environment, culture, or social structure
visioning	the process of community goal-setting for the future in which communities decide what they would like their future to look like